Farmer-Led Research 2019: **Biochar for Apple Orchards**

Farmer-Researcher(s):  
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EFAO Contact  
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This document outlines the steps that Val and Brent will follow to execute their research project, *Biochar for Apple Orchards*, including design, execution, data collection and data sharing. It also serves as a Memorandum of Understanding between Val and Brent and EFAO.

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**Background**

Val was curious to know if biochar has a chance of helping her head in right direction, with respect to soil organic matter and carbon storage on her farm.

For more information on the project, refer to:  
[2018 Research Protocol](efao.ca/research-library)  
[2018 Research Report](efao.ca/research-library)

**Measurements Update**

**Tree Health**

Val used a [tree assessment tool](efao.ca/research-library) developed by Lorne Jamieson, which assesses the following 3 factors:

1. **Relative Vitality**: 0-4 for trees with a graft that didn’t take; 5-9 for trees with a successful graft.
2. **Relative Insect Pressure**: A no pressure; B some pressure; and C a lot
3. **Leaf Colour**: G green; Y yellow

Val will use Lorne’s assessment tool 3 times throughout the season, targeting blossom (mid May), mid-season (late July) and harvest season (mid September).

**Soil Health**

Val will use the [Solvita® handheld field meter](efao.ca/research-library) to test for differences in soil respiration in August/September. Other soil health measurements TBD.
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### Research Calendar

<table>
<thead>
<tr>
<th>Time</th>
<th>Task</th>
<th>Action Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blossoming, mid May</td>
<td>Tree health assessment</td>
<td>Sarah will contact Val</td>
</tr>
<tr>
<td>Mid-season, late July</td>
<td>Tree health assessment</td>
<td>Sarah will contact Val</td>
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<tr>
<td>Before August</td>
<td>Get Solvita kit to Val</td>
<td>Sarah will bring kit to EFAO office for pick-up</td>
</tr>
<tr>
<td>August/September</td>
<td>Solvita test</td>
<td>Sarah will contact Val</td>
</tr>
<tr>
<td>Late season, mid September</td>
<td>Tree health assessment</td>
<td>Sarah will contact Val</td>
</tr>
<tr>
<td>October 1, 2019</td>
<td>Deadline</td>
<td>Val will submit data and photos</td>
</tr>
</tbody>
</table>

**Deadline for data, progress report and photo submission**

**October 1, 2019**

**Memorandum of Understanding**

Please refer to [efao.ca/research-mou](http://efao.ca/research-mou) for Memorandum of Understanding.

**Acknowledgements**

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